

AUG 20 2007

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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A process for producing acrylic acid, comprising the steps of:

a) vaporizing a raw material comprising an aqueous glycerol solution to generate a first gas, wherein said aqueous glycerol solution has a water content of not more than 50% by weight;

b) applying a dehydration reaction to glycerol as a raw material in a gas phase that includes said first gas; and then

c) applying a gas phase oxidation reaction to a gaseous reaction product formed by the dehydration reaction.

2. (canceled).

3. (currently amended) The process for producing acrylic acid according to claim 1 ~~or 2~~, wherein the dehydration reaction and the gas phase oxidation reaction are conducted in a tandem-type reactor.

4. (previously presented) The process for producing acrylic acid according to claim 3, wherein oxygen is added to a gas which is transferred from the dehydration reaction to the gas phase oxidation reaction.

5. (currently amended) The process for producing acrylic acid according to claim 1 ~~or 2~~, wherein the dehydration reaction and the gas phase oxidation reaction

(18450.DOC) (Amendment and Remarks--page 2 of 10).

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are conducted in a single-type reactor.

6. (new) The process for producing acrylic acid according to claim 1, and further comprising the steps of:

a) adding an inert gas to the first gas to obtain a resultant mixed gas, wherein the inert gas is selected from the group consisting of nitrogen gas, carbon dioxide gas and rare gas; and

b) controlling a concentration of said inert gas in said resultant mixed gas to a concentration of not less than 50% by volume.